Wiesław Ziaja

GLACIATION

Sørkapp Land glaciation is clearly Artic-type for the following two reasons:

1) common presence of permafrost, which is predominantly frozen solid rock and only in the Quaternary deposits consists of ice mixed with rock material of variable granulation,
2) very weak influence of altitude (above sea level) on the distribution and extent of glaciers.

The northern part of western Sørkapp Land (Fig. 3) includes ca. 50 km^2 of mountains (seven massifs arranged into two ridges with Lisbetdalen valley between them) without glaciers during all of the Holocene, in spite of the fact that their quite extensive and flattened peaks reach an elevation of 640 m (Ziaja 1992, 1999). This is due to the exceptional local climate described earlier (equally high or lower areas situated a few kilometers further to the east and southeast have been superficially glaciated to a substantial degree).

These areas with expansive glaciers flowing from the glaciated peninsula's interior to the west and south, and with small glaciers on coastal mountain massifs, are not part of western Sørkapp Land. The extent of each glacier marks the natural boundary of the western region. A retreat of this extent is simply a shift of this boundary to the east.

The coastal lowlands – which stretch to the west of Körberbreen glacier on Hornsund Fjord and further to the southeast to Olsokbreen glacier on the open Greenland Sea – were also unglaciated throughout the Holocene. The unglaciated slopes of mountains falling to the lowlands of the peninsula's middle west (Breinesflya and others to the southeast) may also be thought of as western Sørkapp Land. However, these mountains are more or less glaciated from the land (interior) side.

Thermo-mineral springs indicate the existence of a talik, which is not covered by a glacier or lake in the southernmost corner of western Sørkapp Land (in Bjørnbeinflya and Olsokflya), analogically to what has been described by Salvigsen and Elgersma (1985).